

REMARKS

The Final Office Action mailed February 9, 2007, has been received and reviewed. Claims 1-5, 7, 8, 11-18, 20-32, 34, 36-47, and 49-54 are pending in the present application. Applicant respectfully responds to this Office Action and traverse all rejections. Applicant has amended claims 1, 7, 8, 14, 20, 22, 26, 34, 36, 41 and 49.

Claim Objections

Claims 7, 20, 34 and 49 are objected to because of the following informalities: In claims 7, 20, 34 and 49 line 1 delete "claim 6," "claim 19," "claim 33," and "claim 48" and insert --- claim 1---, ---claim 14---, ---claim 26---, and ---claim 41---, respectively, because claims 6, 19, 33 and 48 have been cancelled.

Applicant has amended claims 7, 20, 34 and 49 to recite the correct dependencies. Applicant respectfully requests these objections be withdrawn.

35 U.S.C. § 102(b) Anticipation RejectionsAnticipation Rejection Based on U.S. Patent No. 5,159,447 to Haskell et al.

Claims 1, 7-8, 14, 20, 22, 26, 34, 41, 49 and 51-52 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,159,447 to Haskell et al. (hereinafter "the Haskell reference"). Applicant respectfully traverses this rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The 35 U.S.C. § 102(b) anticipation rejections of claims 1, 7-8, 14, 20, 22, 26, 34, 41, 49 and 51-52 are improper because the Haskell reference does not describe, either expressly or inherently, the identical inventions in as complete detail as are contained in the claims. Since the Haskell reference does not describe, either expressly or inherently, the identical inventions in as complete detail as are contained in the claims, the Haskell reference cannot anticipate under 35

U.S.C. § 102 the presently claimed invention of independent claim 1 and claim 7 depending therefrom, independent claim 8, independent claim 14 and claim 22 depending therefrom, independent claim 26 and claim 34 depending therefrom, and independent claim 41 and claims 49, 51, 52 depending therefrom.

The Haskell reference generally discloses a plurality of bit streams of different data types (e.g., video, voice, etc.) that are each respectively streamed into a data type-unique encoder wherein each of the buffered encoder data streams are time multiplexed to keep, for example, coinciding video and audio data aligned in the communication channel. Specifically, the Haskell reference discloses:

Each of individual unencoded bit-streams 111 may be derived from a different source.

Typical sources from which individual unencoded bit-streams 111 may be derived include, without limitation: video, audio and data. For purposes of this example it is presumed that each of the parts of individual unencoded bit-streams 111 are associated together by virtue of having been generated during the same real time period. (Haskell, col. 11, lines 21-28; emphasis added).

As shown in FIG. 2, *each of individual unencoded bit-streams 111-1 through 111-N are supplied as an input to one of encoders 101-1 through 101-N.* For purposes of this example, *unencoded bit-stream 111-1 is designated as a video signal and unencoded bit-stream 111-2 is designated as an audio signal. Each of encoders 101-1 through 101-N are adapted for encoding the type of information carried in the one of individual unencoded bit-streams 111 with which it is supplied and supplying as an output an encoded representation of the data carried therein as one of encoded bit-streams ENCOD-1 through ENCOD-N.* (Haskell, col. 11, line 67-col. 12, line 10; emphasis added).

... it is also specifically required that *parts of each of encoded signals ENCOD are generated during the same time interval are associated together and combined, after encoding, into a predetermined portion of multiplexed stream 112 that corresponds to that time interval.* This requirement facilitates editing of multiplexed stream 112. Thus, as described above, *where video and audio are being multiplexed*, each portion of multiplexed stream 112 would contain a video frame and digitized representation of what was spoken by the speaker during the time interval of that associated video frame. (Haskell, col. 11, lines 36-47; emphasis added).

Claims 1, 7, 14, 20, 22

Applicant's invention as presently claimed in amended independent claim 1, from which claim 7 depends and amended independent claim 14 from which claims 20 and 22 depend, recite in part:

A [] method ... comprising:
encoding systematic bits of a bit stream in each of a plurality of [] buffers with a first code;
multiplexing content of the plurality of [] buffers; and
encoding said multiplexed content with a second code to provide a set of frames, wherein the encoding said multiplexed content comprises identifying a block of bits to be encoded and then coding the block of bits with the second code[.] (Emphasis added.)

At least Applicant's claimed elements of *"encoding systematic bits of a bit stream in each of a plurality of [] buffers"*, *"multiplexing content of the plurality of [] buffers"* and *"encoding said multiplexed content with a second code"* are not disclosed in the Haskell reference. As stated above, the Haskell reference discloses multiplexing a plurality of buffered encoded bit streams which is in distinct contrast to Applicant's invention including the claim elements of *"encoding systematic bits of a bit stream in each of a plurality of [] buffers"* and *"multiplexing content of the plurality of [] buffers"*.

Therefore, since at least Applicant's claimed elements of *"encoding systematic bits of a bit stream in each of a plurality of [] buffers"* and *"multiplexing content of the plurality of [] buffers"* are not disclosed in "as complete detail as is contained in the claim" as is required for anticipation under 35 U.S.C. §102, the Haskell reference cannot anticipate under 35 U.S.C. §102 Applicant's invention as presently claimed in amended independent claim 1 and claim 7 depending therefrom, and amended independent claim 14 and claims 20 and 22 depending therefrom.

Regarding Applicant's claimed element of *"encoding said multiplexed content with a second code"*, the Final Office Action in the Response to Arguments section alleges:

... Fig. 5 [of the Haskell reference] shows encoding, with a second code including identifying block of bits to be encoded from streams a...e, the multiplexed content for transmission on channel 112, since *encoding is merely the process of converting data into code such as converting the encoded data into packets for transmission*. (Final Office Action, p. 2; emphasis added).

Applicant respectfully disagrees with the characterization of the disclosure of FIG. 5 of the Haskell reference. Generally, FIG. 5 of the Haskell reference discloses the concept of "gathering" packets into "packs" which correspond to a system time interval. (Haskell, col. 13,

lines 9-10, col. 14, lines 19-20). The Haskell reference clearly distinguishes between “encoding” and “packet gathering”. Therefore, FIG. 5 of the Haskell reference clearly does not disclose Applicant’s claim element of *“encoding said multiplexed content with a second code”* as alleged by the Final Office Action.

Alternatively, since at least Applicant’s claimed element of *“encoding said multiplexed content with a second code”* is not disclosed in “as complete detail as is contained in the claim” as is required for anticipation under 35 U.S.C. §102, the Haskell reference cannot anticipate under 35 U.S.C. §102 Applicant’s invention as presently claimed in amended independent claim 1 and claim 7 depending therefrom, and amended independent claim 14 and claims 20 and 22 depending therefrom.

Accordingly, such claims are allowable over the cited prior art and Applicant respectfully requests that such rejections be withdrawn.

Claim 8

Applicant’s invention as presently claimed in amended independent claim 8 recites:

8. A method reducing decoding complexity, comprising:
 decoding received frames by a first decoder;
 de-multiplexing correctly decoded frame to a plurality of buffers, wherein the de-multiplexing comprises identifying a block of bits comprising the correctly decoded frame decoded by the first decoder and belonging to at least one of the plurality of buffers, and further providing the block of bits to at least one of the plurality of buffers; and
processing content of each of the plurality of buffers into a bit stream. (Emphasis added.)

At least Applicant’s claimed element of *“processing content of each of the plurality of buffers into a bit stream”* is not disclosed in the Haskell reference. As stated above, the Haskell reference discloses multiplexing a plurality of buffered encoded bit streams which is in distinct contrast to Applicant’s invention including the claim element of *“processing content of each of the plurality of buffers into a bit stream”*.

Therefore, since at least Applicant’s claimed element of *“processing content of each of the plurality of buffers into a bit stream”* is not disclosed in “as complete detail as is contained in the claim” as is required for anticipation under 35 U.S.C. §102, the Haskell reference cannot

anticipate under 35 U.S.C. §102 Applicant's invention as presently claimed in amended independent claim 8.

Accordingly, such claim is allowable over the cited prior art and Applicant respectfully requests that such rejection be withdrawn.

Claims 26, 34, 41, 49, 51, 52

Applicant's invention as presently claimed in amended independent claim 26, from which claim 34 depends and amended independent claim 41 from which claims 49, 51 and 52 depend, recite in part:

An apparatus ... comprising:

a plurality of buffers;

a plurality of encoders, each of said plurality of encoders being communicatively coupled to one of said plurality of [] buffers wherein said plurality of buffers are configured to receive systematic bits from a bit stream;

a multiplexer communicatively coupled to said plurality of [] buffers; and

an inner encoder communicatively coupled to said multiplexer, wherein the inner encoder is configured to identify a block of bits to be encoded and encode the block of bits with an inner code (Emphasis added.)

At least Applicant's claimed elements of "*a plurality of encoders ... coupled to ... said plurality of buffers are configured to receive systematic bits from a bit stream*" and "*an inner encoder ... configured to ... encode ... with an inner code*" are not disclosed in the Haskell reference. As stated above, the Haskell reference discloses multiplexing a plurality of buffered encoded bit streams which is in distinct contrast to Applicant's invention including the claim elements of "*a plurality of encoders ... coupled to ... said plurality of buffers are configured to receive systematic bits from a bit stream*" and "*an inner encoder ... configured to ... encode ... with an inner code*".

Therefore, since at least Applicant's claimed elements of "*a plurality of encoders ... coupled to ... said plurality of buffers are configured to receive systematic bits from a bit stream*" and "*an inner encoder ... configured to ... encode ... with an inner code*" are not disclosed in "as complete detail as is contained in the claim" as is required for anticipation under 35 U.S.C. §102, the Haskell reference cannot anticipate under 35 U.S.C. §102 Applicant's

invention as presently claimed in amended independent claim 26 and claim 34 depending therefrom, and amended independent claim 41 and claims 49, 51 and 52 depending therefrom.

Accordingly, such claims are allowable over the cited prior art and Applicant respectfully requests that such rejections be withdrawn.

Claim Rejections under 35 U.S.C. § 103

Claims 2-5, 11, 15-18, 21, 23, 27-32, 42-47 and 54 were rejected as being unpatentable over the Heskell reference in view of U.S. Patent 6,560,206 to Naden et al (hereinafter "the Naden reference"). This rejection is respectfully traversed. Applicant respectfully traverses this rejection, as hereinafter set forth.

The nonobviousness of independent claim 1 precludes a rejection of claims 2-5 which depend therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. *See In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, Applicant requests that the Examiner withdraw the rejection to independent claim 1 and claims 2-5 which depend therefrom.

The nonobviousness of independent claim 8 precludes a rejection of claim 11 which depends therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. *See In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, Applicant requests that the Examiner withdraw the rejection to independent claim 8 and claim 11 which depends therefrom.

The nonobviousness of independent claim 14 precludes a rejection of claims 15-18, 21 and 23 which depend therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. *See In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, Applicant requests that the Examiner withdraw the rejection to independent claim 14 and claims 15-18, 21 and 23 which depend therefrom.

The nonobviousness of independent claim 26 precludes a rejection of claims 27-32 which depend therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. *See In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, Applicant requests that the Examiner withdraw the rejection to independent claim 26 and claims 27-32 which depend therefrom.

The nonobviousness of independent claim 41 precludes a rejection of claims 42-47 and 54 which depend therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. See In re Fine, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), see also MPEP § 2143.03. Therefore, Applicant requests that the Examiner withdraw the rejection to independent claim 41 and claims 42-47 and 54 which depend therefrom.

Claims 12, 24, 36-39, 50, 53 were rejected as being unpatentable over the Heskell reference in view of U.S. Patent 6,052,812 to Chen et al (hereinafter "the Chen reference"). This rejection is respectfully traversed. Applicant respectfully traverses this rejection, as hereinafter set forth.

Regarding claim 12, the nonobviousness of independent claim 8 precludes a rejection of claim 12 which depends therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. See In re Fine, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), see also MPEP § 2143.03. Therefore, Applicant requests that the Examiner withdraw the rejection to independent claim 8 and claim 12 which depends therefrom.

Regarding claim 24, the nonobviousness of independent claim 14 precludes a rejection of claim 24 which depends therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. See In re Fine, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), see also MPEP § 2143.03. Therefore, Applicant requests that the Examiner withdraw the rejection to independent claim 14 and claim 24 which depends therefrom.

Regarding claims 36-39, Applicant respectfully traverses this rejection, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on

applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added).

The 35 U.S.C. § 103(a) obviousness rejections of claims 36-39 are improper because the elements for a prima facie case of obviousness are not met. Specifically, the rejection fails to meet the criterion that the prior art reference must teach or suggest all the claims limitations.

Regarding independent claim 36 and claims 37-39 depending therefrom, Applicant has amended independent claim 36 to include claim limitations not taught or suggested in the cited references.

Applicant's independent claim 36, as presently amended, recites:

36. An apparatus for reducing decoding complexity, comprising:
 a first decoder, wherein said first decoder is configured to:
 decode a received frame;
 provide a correctly decoded frame; and
 provide indication of an erasure if the received frame failed to decode correctly;
 a de-multiplexer communicatively coupled to said first decoder;
 a plurality of buffers communicatively coupled to said de-multiplexer; and
 a plurality of decoders, each of said plurality of decoders being communicatively coupled to one of *said plurality of buffers each being communicatively coupled to form a bit stream*. (Emphasis added.)

Applicant respectfully asserts that neither the Haskell reference nor the Chen reference, either individually or in any proper combination, teach or suggest Applicant's invention as presently claimed in amended independent claim 36. Regarding the teaching or suggestion of the Haskell reference, Applicant respectfully reasserts the above-proffered arguments regarding the lack of teaching or suggestion of Applicant's claimed element of a "*plurality of buffers each being communicatively coupled to form a bit stream*". The Office Action cites the Chen reference for teaching or suggesting "provid[ing] an indication of an erasure to the second decoder". (Final Office Action, p. 11).

Therefore, since neither the Haskell reference nor the Chen reference teach or suggest Applicant's claimed invention including a "*plurality of buffers each being communicatively coupled to form a bit stream*", these references, either individually or in any proper combination, cannot render obvious, under 35 U.S.C. § 103, Applicant's invention as presently claimed in

amended independent claim 36. Accordingly, Applicant respectfully requests the rejection of presently amended independent claim 36 be withdrawn.

The nonobviousness of independent claim 36 precludes a rejection of claims 37-39 which depend therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. See In re Fine, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, Applicant requests that the Examiner withdraw the 35 U.S.C. § 103(a) obviousness rejection to independent claim 36 and claims 37-39 which depend therefrom.

Regarding claims 50 and 53, the nonobviousness of independent claim 41 precludes a rejection of claims 50 and 53 which depend therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. See In re Fine, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, Applicant requests that the Examiner withdraw the rejection to independent claim 41 and claims 50 and 53 which depend therefrom.

Claims 13, 25, 40 were rejected as being unpatentable over the Heskell reference in view of the Chen reference and further in view of the Naden reference. This rejection is respectfully traversed. Applicant respectfully traverses this rejection, as hereinafter set forth.

The nonobviousness of independent claim 8 precludes a rejection of claim 13 which depends therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. See In re Fine, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, Applicant requests that the Examiner withdraw the rejection to independent claim 8 and claim 13 which depends therefrom.

The nonobviousness of independent claim 14 precludes a rejection of claim 25 which depends therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. See In re Fine, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, Applicant requests that the Examiner withdraw the rejection to independent claim 14 and claim 25 which depends therefrom.

The nonobviousness of independent claim 36 precludes a rejection of claim 40 which depends therefrom because a dependent claim is obvious only if the independent claim from

which it depends is obvious. *See In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, Applicant requests that the Examiner withdraw the rejection to independent claim 36 and claim 40 which depends therefrom.

CONCLUSION

Claims 1-5, 7, 8, 11-18, 20-32, 34, 36-47 and 49-54 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicant's undersigned attorney.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

Dated: July 26, 2007

By: 

Darrell Scott Juneau, Reg. No. 39243
(858) 658-2491

QUALCOMM Incorporated
5775 Morehouse Drive
San Diego, California 92121
Telephone: (858) 658-5787
Facsimile: (858) 658-2502